PROPOSED

PERMIT APPLICATION REVIEW
COVERED SOURCE PERMIT (CSP) No. 0386-02-C
Renewal Application No. 0386-06

Applicant: Pohakulepo Recycling, LLC
Facility: 800 TPH Stationary Rock Crushing Plant
Located at: UTM - 758,540 meters East and 2,304,000 meters North
Wailuku, Maui

Mailing Address: P.O. Box 262
Puunene, HI 96784

Equipment: 1) The rock crushing plant consists of the following equipment and associated appurtenances:

a. 800 TPH Cedarapids primary jaw crusher (30" x 42"), serial no. 47420;
b. 395 TPH Symons secondary cone crusher (4-1/4' diameter), serial no. BPH18566;
c. 400 TPH Impact Service Corporation tertiary crusher, model no. 77 VSI, serial no. 77-175 (41" table diameter);
d. Eljay triple deck screen (5' x 16'), serial no. 48203;
e. Eljay triple deck screen (6' x 16'), serial no. 32D1591;
f. Hewitt-Robins scalping screen (5' x 12'), serial no. C70576602;
g. Cedarapids vibrating grizzly feeder (42" X 17'), serial no. 47421;
h. Various conveyors;
i Various enclosures; and
j. Water spray system.

2) Replacement crusher is listed as follows:

a. 323 TPH Minyu Primary Jaw Crusher (30" x 42") Replacement.

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1. Background

1.1 Pohakulepo Recycling Partnership, LLC has submitted an application to renew the covered source permit for their stationary rock crushing facility to produce base coarse aggregate for roadway construction. The plant is considered a fixed plant instead of one that is portable because equipment is bolted to concrete foundations. Power for the plant is provided by the electric company. Standard Industrial Classification Code for this facility is 1429 (Crushed and Broken Stone, Not Elsewhere Classified).

2. Applicable Requirements

2.1 See permit application review 0386-02 and 0386-03 for applicability to Hawaii Administrative Rules.

2.2 40 Code of Federal Regulations (CFR), Part 60-Standards of Performance for New Stationary Sources
Subpart A-General Provisions
Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants

The capacity of the fixed rock crushing plant is greater than 25 TPH and the primary crushers were manufactured after August 31, 1983. Therefore, Subpart OOO of 40 CFR is applicable to this facility.

2.3 The Consolidated Emissions Reporting Rule (CERR) is not applicable because PM-10 emissions from the facility (for CERR applicability, the facility is a point source) are less than reporting levels pursuant to 40 CFR 51, Subpart A (see table below).

CERR APPLICABILITY			
Pollutant	Facility Emissions (TPY)	CERR Triggering Levels (TPY)	
		1 year cycle (type A sources)	3 year cycle (type B sources)
PM-10	5.586	≥ 250	≥ 100

2.4 The facility will be placed into the Compliance Data System (CDS) since the fixed rock crushing plant is a covered source.

2.5 Prevention of Significant Deterioration (PSD) review does not apply because the plant is not a major stationary source.

2.6 The facility is not a major source for HAPs and is not subject to National Emissions Standards for Hazardous Air Pollutants (NESHAPS) or Maximum Achievable Control Technology (MACT) requirements under 40 CFR Parts 61 or 63.

2.7 The facility is a synthetic minor source because the 2,080 hr/yr limit on the rock crushing plant and the 540,800 ton/yr total combined production limit for the primary crushers prevents the facility from triggering major source levels (100 TPY) for particulate matter. See Paragraph 6.4.

2.8 There are no proposed modifications for this permit renewal. As such, a Best Available Control Technology (BACT) analysis is not required.

2.9 The purpose of Compliance Assurance Monitoring (CAM) is to provide reasonable assurance that compliance is being achieved with large emission units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR, Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential precontrol emissions that are greater than the major source level; and (5) not otherwise be exempt from CAM. CAM is not applicable to equipment at this facility because the plant is not a major source.

3. Insignificant Activities

3.1 No insignificant activities were reported.

4. Alternative Operating Scenarios

4.1 No alternative operating scenarios were reported.

5. Air Pollution Controls

5.1 Wet suppression methods (water spray heads, water truck, and water hose) will be used to control fugitive dust for rock crushing operations. Water for the plant's water spray system will be available (through agreement) from an agricultural reservoir adjoining the property.

5.2 Enclosures will be used in conjunction with water sprays to control fugitive dust at various transfer points (primary crusher, screens, and conveyors).

6. Project Emissions

6.1 AP-42 emission factors to determine PM and PM-10 from rock crushing have not been revised since the previous permit modification under application 0386-05. Emissions, based on AP-42, Revision (1/95), Section 11.19.2, "Crushed Stone Processing" are shown in previous permit application review and are summarized as follows:

CRUSHING AND SCREENING PLANT EMISSIONS		
Pollutant	Emission Rate (TPY) [2,080 hr/yr with controls]	Emission Rate (TPY) [8,760 hr/yr with controls]
PM	5.984	25.202
PM-10	2.850	12.003

6.2 AP-42 emission factors to determine particulate matter emissions from storage piles have not been revised since the previous permit modification under application 0386-05. However, emissions were recalculated based on emission factors determined by the applicant's consultant. Emissions, based on assumptions from the applicant's consultant and AP-42, Section 13.2.4 (1/95), "Aggregate Handling and Storage Piles" are summarized as follows:

STOCKPILE EMISSIONS			
Pollutant	Emission Factor (lb/ton)	Emission Rate (TPY) [2,080 hr/yr with controls]	Emission Rate (TPY) [8,760 hr/yr with controls]
PM	0.00713	0.667	2.809
PM-10	0.00337	0.315	1.327

6.3 AP-42 emission factors to determine particulate mater emissions from vehicle travel on unpaved roads have not been revised since the previous permit modification under application 0386-05. However, emissions were recalculated using the following assumptions:

a. Maximum 5,909 miles traveled by haul trucks based on information from the applicant's consultant;

b. A k (particle size multiplier) value for PM and PM-10 of 10 and 2.6 respectively based on AP-42;

c. A W (mean vehicle weight) value of 39 tons based on information from the applicant's consultant;

d. An s (silt content of road) value of 10% for stone quarrying and processing plant road based on information from the applicant's consultant;

e. An S (mean vehicle speed) value of 10 miles per hour based on information from the applicant's consultant;

f. An M (surface material moisture content) default value of 0.2 based on information from applicant's consultant and AP-42;

g. A p (# of days with 0.1 inch of rain per year) value of 97 based on available data between years 1954 to 2003 from the Kahului WSO AP 398 station (www.wrcc.dri.edu/cgi-bin). The applicant's consultant used a p value of 347;

h. A factor of 10/15 was applied to calculate the emission factor to account for the tendency of the emission factor equation to over estimate emissions for speeds less than 15 miles per hour; and

i. Emissions, based on the above information and AP-42, Section 13.2.2 (9/98), "Unpaved Roads" are summarized as follows:

VEHICLE TRAVEL EMISSIONS			
Pollutant	Emission Factor (lb/vmt)	Emission Rate (TPY) [2,080 hr/yr with controls]	Emission Rate (TPY) [8,760 hr/yr with controls]
PM	15.25	13.519	56.935
PM-10	3.07	2.721	11.460

6.4 Facility-wide emissions are summarized as follows:

FACILITY-WIDE EMISSIONS			
Pollutant	Emissions (TPY) [2,080 hr/yr with water sprays]	Emissions (TPY) [8,760 hr/yr with water sprays]	Emissions (TPY) [8,760 hr/yr with water sprays and without production limit][a]
PM	20.170	84.946	543.509
PM-10	5.886	24.790	158.614

a) Production limit restricts plant to 260 TPH (540,800 ton/yr at 2,080 hr/yr). Maximum capacity of plant is at least 395 TPH based on capacity of the Symons secondary cone crusher (3,460,200 ton/yr at 8,760 hr/yr).

7. Air Quality Assessment

7.1 A new ambient air quality impact analysis is not required for this facility. See permit application review 0386-02.

8. Significant Permit Conditions

8.1 Update permit as applicable.

9. Conclusion and Recommendation

9.1 The plant is equipped with a water spray system and enclosures to control fugitive dust. Additional dust control is provided by a water spray truck along facility grounds. Actual particulate emissions should be lower than those estimated because emissions calculations were based on equipment operating at maximum capacity. Plant equipment is not expected to operate at maximum capacity continuously when processing crushed aggregate. Recommend issuance of the permit renewal subject to the 30-day public comment period and 45-day review by the Environmental Protection Agency (EPA). The public comment period and EPA review will be initiated simultaneously.

Mike Madsen 11-14-2003